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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/723,813	11/28/2000	Yasuharu Asano	450100-02862	6411

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FROMMER LAWRENCE & HAUG
745 FIFTH AVENUE- 10TH FL.
NEW YORK, NY 10151

EXAMINER

JACKSON, JAKIEDA R

ART UNIT	PAPER NUMBER
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2655

DATE MAILED: 11/14/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/723,813

Applicant(s)

ASANO ET AL.

Examiner

Jakieda R Jackson

Art Unit

2655

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 November 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other: ____

DETAILED ACTION

Specification

1. The title of the invention is not descriptive. It is too broad. A new title is required that is clearly indicative of the invention to which the claims are directed.
2. The specification is objected to because of the following informalities:
 - The words "voice recognition" should be replaced for the intended --speech--, in view of speech recognition reference (Edatsune).
Appropriate correction is required.

Claim Objections

3. **Claims 1-11** are objected to because of the following informalities:
 - The phrases "An voice" should be --A voice--.
Appropriate correction is required.
 - The words "voice recognition" should be replaced for the intended --speech--, in view of speech recognition reference (Edatsune).
Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. **Claims 1-3, 7-10** are rejected under 35 U.S.C. 102(b) as being anticipated by Edatsune (U.S. Patent No. 5,802,488, also EP 0730261, citation for the US Patent).

Regarding **claim 1**, Edatsune discloses interactive speech recognition with varying responses for time of day and environmental conditions, hereinafter referenced as an “interactive speech recognition device”. Edatsune’s interactive speech recognition device is built in a stuffed toy dog (figure 1A; column 4, lines 25-28) comprising:

voice processing means for processing a voice (speech recognition unit, figure 1A, element 5; column 1, lines 49-55); and

control means for controlling said voice processing means (drive control unit) based on the state of the robot (figure 1B, element 7; column 6, lines 37-51).

Regarding **claim 2**, Edatsune discloses an interactive speech recognition device wherein said control means control said voice process based on the state of actions (column 1, lines 8-10), emotions or instincts.

Regarding **claim 3**, Edatsune discloses an interactive speech recognition device wherein voice processing means comprises voice synthesizing means for performing

voice synthesizing processing and outputting synthesized sound (figure 1a, element 6; column 2, lines 7-10); and

wherein said control means control the voice synthesizing processing by said voice synthesizing means, based on the state of the robot (figure 1B, element 7; column 6, lines 37-51).

Regarding **claim 7**, Edatsune discloses an interactive speech recognition device wherein said voice processing means comprises voice recognizing means for recognizing input voice (column 1, lines 8-10); and

wherein said robot takes action corresponding to the reliability of the voice recognition results output from said voice recognizing means (column 1, lines 8-10), or the emotion of said robot is changed based on said reliability.

Regarding **claim 8**, Edatsune discloses an interactive speech recognition device wherein said control means recognizes the action which said robot is taking, and controls voice processing by said voice processing means based on the load regarding the action (column 1, lines 8-10).

Regarding **claim 9**, Edatsune discloses an interactive speech recognition device wherein said robot takes action corresponding to resources which can be appropriated to voice processing by said voice processing means (column 1, lines 8-10 with column 3, lines 58-62).

Regarding **claim 10**, the method is inherent in the device and is interpreted and rejected for the same reasons as set forth in **claim 1**.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. **Claims 4-6 and 11** are rejected under 35 U.S.C. 103(a) as being unpatentable over Edatsune in view of Henton (U.S. Patent No. 5,860,064)

Regarding **claim 4**, Edatsune discloses an interactive speech recognition device control but fails to disclose that the control means control phonemics information and pitch information output by said voice synthesizing means. Henton discloses that the control means control phonemics information (column 1, line 67 – column 2, lines 1-7) and pitch information (column 2, lines 8-10) output by voice synthesizing means. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Edatsune's interactive speech recognition device such that it included a control means to control phonemics and pitch information to appropriately express the state of emotions of the robot.

Regarding **claim 5**, Edatsune discloses an interactive speech recognition device but lacks the control means controlling the speed and volume. Henton discloses that the said control means (speech synthesizer) control the speech speed (table 1) or volume (table 1) of synthesized sound output by said voice synthesizing means. Therefore, it would have been obvious to one of ordinary skill in the art at the time the

invention was made to modify Edatsune's interactive speech recognition device such that it has control means for controlling the speed and volume so that the robot can express emotions to the user with both motions and synthesized sound to make the interaction more real.

Regarding **claim 6**, Edatsune discloses an interactive speech recognition device but lacks the control pitch or phonemics information of the input voice and wherein the emotion state is based on that information. Henton discloses that said voice processing means extract the control pitch information or phonemics information of the input voice (column 1, line 67 – column 2, lines 1-7); and

wherein the emotion state of said robot is changed based on said pitch information or phonemics information (column 3, lines 24-31), thus said robot takes actions corresponding to said pitch information or phonemics information. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Edatsune's interactive speech recognition device such that it has the control pitch or phonemics information of the input voice and wherein the emotion state is based on that information to make the speech produced more interesting and not deficient in vocal emotionality and to provide vocal emotion sound qualities to synthetic speech.

Regarding **claim 11**, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a recording medium to store data such as computer executable code for controlling actions, voice recognition etc.

Double Patenting

6. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

7. **Claims 1-2, 7 and 10-11** are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over **claims 1-2 and 10-11** of copending Application No.09/723,512. Although the conflicting claims are not identical, they are not patentably distinct from each other because

Regarding **claim 1**, 09/723,813 discloses a voice processing device, but lacks that the voice processing is a voice recognition apparatus. 09/723,512 discloses voice recognition apparatus (a voice processing device) disposed (built) into a robot, comprising:

voice recognition means (voice processing means) for recognizing (processing) voice; and
control means for controlling said voice recognition (processing) means in accordance with the state of said robot (claim 1). It would have been obvious to one of ordinary skill in the art at the time the invention was made to process voice that is recognized

because voice processing comprises voice recognition which allows the object to output sound parameters, for example, extract pitch information etc.

Regarding **claim 2**, 09/723,512 discloses a voice recognition apparatus (voice processing device) wherein control means control said voice recognition (voice process) means in accordance with the state of the robot in terms of the emotion or instinct (claim 2). Therefore, **claim 2** is interpreted and rejected for the same reasons as set forth in **claim 1**.

Regarding **claim 7**, 09/723,512 discloses a voice processing device (voice processing apparatus wherein said voice processing means comprises voice recognizing means for recognizing input voice (voice recognition means; claim 1); and

wherein said robot takes action corresponding to the reliability of the voice recognition results output from said voice recognizing means, or the emotion of said robot is changed based on said reliability (emotion and state; claim 2). Therefore, **claim 7** is interpreted and rejected for the same reasons as set forth in **claim 1**.

Regarding **claim 10**, 09/723,512 discloses a voice recognition method (voice processing method) for a voice recognition apparatus disposed in a robot, comprising the steps of:

recognizing a voice (a voice processing step for processing voice); and controlling said voice recognition (controlling voice processing) step in accordance with the state of said robot (claim 10). Therefore, **claim 10** is interpreted and rejected for the same reasons as set forth in **claim 1**.

Regarding **claim 11**, 09/723,813 discloses a recording medium but lacks that the recording medium is a storage medium. 09/723,512 discloses a storage (recording) medium on which a program to be executed by a computer to make (for causing) a robot perform voice recognition (voice processing) is stored, said program comprising the steps of:

recognizing a voice (a voice processing step for processing voice); and controlling said voice recognition (controlling voice processing) step in accordance with the state of said robot (claim 11). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made that a recording medium is a device used to store voice, or the like, for later retrieval and use.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 6,446, 056 to Sadakuni disclose an interactive artificial intelligence device disposed in a robot.

U.S. Patent No. 6,243,680 to Gupta et al. discloses a method and apparatus obtaining a transcription of phrases through test and spoken utterances.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jakieda R Jackson whose telephone number is 703.305.5593. The examiner can normally be reached on Monday through Friday from 7:30 a.m. to 5:00p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Talivaldis I. Smits can be reached on 703. 306-3011. The fax phone numbers for the organization where this application or proceeding is assigned are 703.872.9314 for regular communications and 703.872.9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703.305.4700.

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JRJ

October 31, 2003


RICHEMOND DORVIL
SUPERVISORY PATENT EXAMINER